Integrate research results and clinical judgement

Systematic reviews, such as ours, of strengthening interventions for children with cerebral palsy, raise important clinical questions. We would certainly not suggest abandoning the recent interest in strength training in children with cerebral palsy. At the moment, however, the evidence which does exist shows that strengthening is not effective and we have yet to find the most effective method of improving strength in children with cerebral palsy. The trials we reviewed were of moderate to high quality. Therefore, ignoring the results in favour of uncontrolled trials would be unwise. Using evidenced-based practice means integrating individual clinical expertise with the best available external clinical evidence from systematic research (Sackett et al 2000). So how should we use the current information to guide practice?

First, it is useful to examine the characteristics of the participants in the trials. In our review, the participants were independent walkers either with or without aids. This means that they were probably already strong enough to carry out activities. However, we know little about the effect of strengthening with children who are very weak. Therefore, if clinical assessment suggests that a child with cerebral palsy is very weak, clinical judgement will decide whether strengthening specific muscles could be useful.

Second, the intensity of strength training in these trials was not always consistent with accepted recommendations for young adults (American College of Sports Medicine, 2002). Although, the exact intensity of a strengthening intervention for children is not known, it is important that it should be at a high enough level for substantial strength gains to be achieved. If clinical assessment suggests that strengthening in a child with cerebral palsy who is mildly weak could be useful, then at the very least, the intensity and duration of the intervention should be more than was applied in the studies we reviewed.

Systematic reviews offer a snapshot of the evidence at a particular point in time and therefore, raise important issues for future directions. In this case, would strengthening interventions be of more value in weaker participants? And, would studies with higher intensities of strengthening interventions show more effect? If questions raised as a result of our review lead to randomised trials being designed to meet these challenges, then we may see a different result in future meta-analyses.

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References